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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/541,934

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Jesus-Angel de Gregorio

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EXAMINER

KELLEY, STEVEN S

ART UNIT

PAPER NUMBER

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/541,934	<b>Applicant(s)</b> DE GREGORIO ET AL.	
	<b>Examiner</b> STEVEN KELLEY	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Independent claims 1 and 10 recite “a global Single-Sign-On Front End (G-SSO-FE) infrastructure,” however there is no description in the written description defining and/or explaining what structures are included in the “global Single-Sign-On Front End (G-SSO-FE) infrastructure”. The written description only contains functional descriptions and intended uses of the “global Single-Sign-On Front End (G-SSO-FE) infrastructure” (33), but does not set forth any structures and/or how such structures can be modified/configured, which would enable one skilled in the art to make and/or use the invention.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2, 6, 7, 10 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term “Multinational Network Operators” used in claims 1, 2, 7, 10 and 18, is unclear. A “multinational network operator” could be interpreted as referring to a network operator (person). It is believed that this term is referring to networks, (not operators) and if so, it is also unclear as to how a network may be considered as being “multinational.”

Claim 1 recites the phrases “responsible for...” and “intended to act” which do not positively recite/include the intended features in the claim. Claim 6 also uses the phrase “responsible for...”, which does not positively recite/include the intended features in claim 6.

Claim 10 the phrase “performing a first authentication of a user in a visited packet radio network toward the user’s home service network” is unclear. The phrase “redirecting a user” in step 9 (c) appears inaccurate as it is not the user that is redirected, it is data related to the user that is redirected.

Additionally, the scope of claims 1 and 10 are indefinite as it is unclear (based on Applicant’s disclosure) what the scope of a “global Single-Sign-On Front End (G-SSO-FE) infrastructure” encompasses.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-14 and 19 are rejected under 35 U.S.C. 103(a) as obvious over WO 02/011467 to Jones et al. (hereinafter "Jones") in view of U.S. Pat. Pub. No. 2003/0051041 to Kalavade et al. (hereinafter "Kalavade"). Regarding claim 1, it is noted that the recited term "Single Sign-On" may be broadly interpreted to mean signing on to a network one time. Regarding the structure recited in claim 1, Jones teaches a visited Serving GPRS Node 27, which is connected to a Roaming RADIUS Server 37 and a Home RADIUS server 34, which are connected and function as recited in claim 1. See for example, Figs. 1 and 4, the description thereof. Additionally, as the system described in Jones operates with a home server 34 located in San Francisco and a roaming server 37 located in New York, the visited GPRS support node 27 included within the Radio Network Controller 24, may be interpreted as the claimed "global Single Sign-On Front End infrastructure." Although Jones teaches that the visited AAA (RADIUS) server 37 communicates with the home AAA server 34, Jones does not explicitly disclose that the visiting AAA server "binds the home AAA server address with the user's identifiers." In an analogous art, Kalavade teaches a system for consolidated billing used with roaming wireless devices. See for example, Fig. 1 of Kalavade. Kalavade teaches that a user may enter a phone number and password via a Converged Billing /Authentication Gateway (CBG) server 10, in order to access services in a home network. Kalavade also includes a CBG database 14 used to store

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information relating to a roaming user and related information. Kalavade shows (on pages 11-13) the details of the information stored relating to a roaming user with include IP addresses of WLAN endpoints, such as for example, a home billing system or HLR, etc. Therefore, in order to increase the efficiency of billing procedures and communications, it would have been obvious to modify the visited AAA server of Jones to include the capability of binding a user's identifiers with a home AAA server as taught by Kalavade.

Regarding claims 2-3, the CBG database 14 of Kalavade teaches the recited features of the "Global Directory".

Regarding the information recited in claims 4-6, as described above, Kalavade shows on pages 11-13 the details stored in the CBG database, which include the recited IP addresses, user identifiers, passwords and time stamp found in these claims.

Regarding claims 7-9, Jones teaches a roaming agreement between ISPs, which meets the recited "number of service providers." Although Jones shows only one visited GPRS node 27 used to access a visited network, it is common for a plurality of networks to be connected. Kalavade teaches in section [0204] that each network and/or "hot spot" "typically has its own authentication infrastructure". Therefore it would have been obvious to modify Jones to include sign on infrastructure for each connected network and/or service provider, in order to allow roaming users to sign on to any available network.

6. Regarding claim 10, as described above, Jones teaches a system for authenticating roaming users. Fig. 3 of Jones shows the claimed steps of (a) performing an authentication of a user, (b) creating a master session at the user's home service network (c) redirecting a user towards the user's home network and (d) receiving an authentication from the home server. Jones does not explicitly disclose that the master session created in the user's home network is created with "Single Sign-On related data, as recited in step (b). As described above, Kalavade teaches a system for consolidated billing used with roaming wireless devices where a user may enter a phone number and password via a Converged Billing /Authentication Gateway (CBG) server 10, in order to access services in a home network. Kalavade further teaches of forwarding "single sign on related data" such as the entered phone number, IMSI number and information as shown in the table on pages 11-13, to backend accounting and billing servers/systems. Therefore, in order to correctly track, identify and bill roaming users within a network, it would have been obvious to modify the home RADIUS server of Jones to include the capability of creating a master session with single sign on related data, as shown in Kalavade.

Regarding claims 11, 13 and 16, Kalavade shows a table on pages 11-13 that include the recited IP addresses, user identifiers, passwords and time stamp, recited in these claims.

Regarding claim 12, Kalavade teaches assigning a GRPS node to the user and transmitting the address of the GGSN used. See for example, Fig. 11 and information in the table on pages 11-13.

Regarding claim 14, Jones shows the visited AAA server 37, connected and acting as a proxy between the GPRS Support node and the home AAA server.

Regarding claim 19, Kalavade teaches providing addresses of devices (recited "entities") validating and authenticating user information.

7. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones and Kalavade as applied to claims 1-14 above, and further in view of U.S. Patent 6,578,085 to Khalil et al. (hereinafter "Khalil"). Claim 15 recites "determining the visited network which assigned the current IP address to the user". Khalil teaches tracking IP addresses assigned to a mobile node, where the IP addresses are assigned by a number of foreign networks. Khalil further teaches "determining visited networks which assigned IP addresses to a user", as shown in Figs. 10-13, which detail and describe the communications between the home and foreign networks regarding the registering and deregistering of IP addresses assigned to the mobile node by the foreign networks. Therefore, in order to correctly track, identify and bill roaming users within a number of networks, it would have been obvious to modify the Jones/Kalavade combination to include the capability of determining visited networks, as shown in Khalil.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEVEN KELLEY whose telephone number is (571) 272-5652. The examiner can normally be reached on Monday-Friday, 9AM to 5PM.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lester Kincaid/  
Supervisory Patent Examiner, Art Unit 2617

SSK